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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,952	09/21/2000	Yoshiyuki Sogawa	32405W047	9483

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EXAMINER

SELBY, GEVELL V

ART UNIT PAPER NUMBER

2615

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/665,952

Applicant(s)

SOGAWA, YOSHIYUKI

Examiner

Gevell Selby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005 and 04 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 and 24 is/are allowed.
- 6) ☒ Claim(s) 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see the amendment, filed 8/4/05, with respect to claims 1-22 and 24 have been fully considered and are persuasive. The 35 U.S.C. 102 and 103 rejections of claims 1-22 and 24 have been withdrawn.

2. Applicant's arguments filed 6/17/05 have been fully considered but they are not persuasive in regard to claim 23. The applicant submits the prior art does not disclose the limitation "wherein said amount is individually set for each reference pixel region in the first image so as to set the search range in the second image in relation to a position of the reference pixel region in the first image" as claimed in claim 23. The examiner respectfully disagrees.

Examiner's Reply:

Re claim 23) The Tanigawa reference discloses the distance detection circuit or address generator corrects each window or location of the range by using the bias (bs) or amount of deviation on the parallax at a point a infinity with respect to the referenced pixel region (see column 4, lines 10-14 and 22-55 and column 8, lines 37-55). The amount of deviation of an infinite distance corresponding point is individually set for each reference region in the first image so as to set the search window or range location in the second image according to the first image (see column 9, lines 5-25: the bias (BS) calculated from the deviation from the first window is used as a coefficient in the polynomial added or subtracted from the value of the search window of the second image to correct the value).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanigawa, US 5,915,033.**

In regard to claim 23, Tanigawa et al., US 5,915,033, discloses a stereo matching apparatus comprising:

a stereo camera system for taking pictures of a predetermined area and producing first and second images of the predetermined area (see column 3, lines 49-67);

a reference pixel region identifying unit (distance detection circuit) for identifying a reference pixel region (WD1) in the first image (see column 4, lines 40-48);

a search range identifying unit (distance detection device) for identifying a search range for the reference pixel region (WD2) in the second image (see column 3, line 63 to column 4, line 9);

a correction unit (distance detection device) for correcting a location of the search range for the reference pixel region based on the amount of deviation of an infinite distance corresponding point (bias BS) with respect to a horizontal position of the reference pixel region (see column 4, lines 31-48); and

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a correlated destination identifying unit (distance detection device) for identifying a correlated destination of the reference pixel region by searching through the search range (see column 4, lines 49-55);

wherein said amount is individually set for each reference pixel region in the first image so as to set the search range in the second image in relation to a position of the reference pixel region in the first image (see column 9, lines 5-25: the bias (BS) calculated from the deviation from the first window is used as a coefficient in the polynomial added or subtracted from the value of the search window of the second image to correct the value).

Allowable Subject Matter

5. Claims 1-22 and 24 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 1-21 and 24, the prior art does not disclose the combination of limitations specified in the claimed invention, specifically the limitations of:

a correction table for storing values based on a calibration process carried out with respect to the stereo camera system; an address generator for setting a search range in the second image for a stereo matching and instructing to read out from said memory a part of the second image data within the search range and the first image data within the reference pixel

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region, the search range being set according to a value read from the correction table; wherein the value read from the correction table is indicative at least in part of an amount of deviation of an infinite distance corresponding point with respect to a horizontal position of the reference pixel region, said amount being individually set for each reference pixel region in the first image so as to set the search range in the second image in relation to each reference pixel region in the first image, as claimed in claim 1.

In regard to claim 22, the prior art does not disclose the combination of limitations specified in the claimed invention, specifically the limitations of:

taking picture of a screen by a pair of stereo cameras and producing first and second images of the screen, said screen being drawn a first vertical line and a second vertical line at an interval equal to a baseline of the stereo cameras and calculating each infinite distance corresponding point corresponding to each position on the first vertical line shown on the first image on the basis of the deviation of the position of the second vertical line, as claimed in claim 22.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,381,360 and US 6,373,518, also invented by the applicant, disclose stereo cameras with correction tables that store values using in correcting deviation of the two images.

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8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



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